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ABSTRACT

A study of recent graduates of two School of Education undergraduate programs illustrates institutional research design and utilization issues. A survey mailed to 800 alumni from 5 graduating classes (1987-1991) resulted in 326 responses from those with a Teacher Education major and 120 responses from those with a Human Development major, and 10 graduates who had both a Teacher Education and a Human Development major. Findings are reported for variations in expectations from college by academic major, variations in perceived professional growth by academic major, evaluation of pre-professional teaching experience, early professional challenges (work-related problems), differences in work-related problems by academic major, relationship of perceived professional growth to problems in early teaching, and relationship between perceived professional growth, pre-professional teaching experience and overall evaluation of undergraduate education. Survey results were presented in separate reports to the Dean, faculty, and program chairpersons. The role of both researchers and administrators in institutional research utilization is emphasized. Critical design issues noted included identifying the appropriate population for the survey, identifying subpopulations for future analysis, planning to ensure an adequate respondent group for analysis, involving the intended audiences of the research in the design phase, designing the survey instrument to obtain the content and level of evaluative feedback of interest to intended audiences, and designing questions and scales which measure the constructs addressed in the research (JB)

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Promoting Utilization of Alumni Research: Design and Implementation Strategies

Paper presented at the Annual Forum

of the Association for Institutional Research

New Orleans, Louisiana May 1994

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Jean Endo
Editor
Forum Publications

Abstract

This paper presents the design, implementation strategies, selected analytical techniques and results from a recently completed undergraduate alumni survey. Issues addressed are relevant to the design of future alumni research. Topics include: the importance of identifying the appropriate population and subpopulations for the survey; planning to ensure an adequate respondent group for analysis; involving the intended audiences of the research in the design phase; designing the survey instrument to obtain the desired information and evaluative feedback; and designing reliable measures of the constructs addressed in the research. The paper also illustrates how both the researcher and the administrator have critical roles with respect to ensuring the utilization of alumni research.

Introduction

The purpose of this paper is to demonstrate how alumni research can be designed and utilized effectively to support a range of institutional functions including assessment, program review, program planning and applied research. The paper presents the design, implementation strategies, selected analytical techniques and results from a recently completed undergraduate alumni survey as well as a discussion of principles and strategies potentially useful for the design of future alumni research studies.

The relevance of alumni research to administrative decision making and various university functions has been recognized for some time (Pace, 1979). Recently, alumni research has assumed increasing importance for its potential contribution to outcomes assessment (Pike, 1990). As Williford and Moden (1989) observe, a unique feature of alumni surveys, compared with surveys of enrolled students, is the capability of documenting students' assessment of the quality of their educational experience tempered by their experiences since graduation. Results from alumni research also provide a basis for examining the relationship between satisfaction with college and academic major (Richardson, 1993), perception of learning during college (Pike, 1993a), and subsequent work experience (Pike, 1993b). Of particular importance to institutional researchers is the realization that in order to serve any of these functions effectively, the alumni research study needs to be designed and the information presented in the appropriate form and at the appropriate level of detail for the intended audiences and users of the results (Moden and Williford, 1988).

Design Issues

The population for this alumni survey included five graduating classes - from 1987 through 1991 yielding a total of 800 School of Education alumni. These alumni graduated with a Teacher Education and/or a Human Development major. Questionnaires were received from 326 graduates with a Teacher Education major, 120 graduates with a Human Development major and 10 graduates who had both a Teacher Education and a Human Development major.

The overall response rate for this alumni survey was 58.76 percent and the response rates for individual academic programs ranged from 52 to 62 percent. Data from this population provided a basis for documenting trends in the relationships between post-graduate experience and satisfaction with undergraduate education, and for evaluating the relationship between changes in graduates' feedback to revisions made in the curriculum during this time period.

The identification and size of the survey population are critical design issues that affect the ability to analyze variations in the data and to make inferences to populations of interest. Generally it is advisable to determine, prior to conducting the study, what subgroup analyses will be conducted, and to estimate not only the overall response rate but also the response rates for individual departments or classes for which inferences might be made. Statistical formulae, taking into account levels of statistical significance and power, may also be used to determine sufficient sample sizes to support tests of significance and inferences to the intended population.

Survey Instrument

The survey instrument in this alumni study was designed to elicit extensive information on graduates' perceptions regarding how well their undergraduate education enhanced various intellectual and interpersonal skills; how well their college education prepared them for their professional life; what challenges they encountered in their early professional careers; and their perceptions regarding how undergraduate education might be improved to better prepare future graduates to meet these challenges. The survey addressed three major areas: Graduates' Evaluation of their Undergraduate Program, Graduates' Post-Graduate Educational and Employment Experience, and Selected Background Information.

The Evaluation of their Undergraduate Program addressed the following types of questions: What were graduates' primary expectation from their undergraduate education? How challenging were aspects of their undergraduate education - classes and field experiences? How satisfied were they with each of the following: practica, supervision, classes, and university resources? And, how much did their education contribute to their growth in different areas, such as communication, critical thinking, multi-cultural awareness and values awareness?

The section on Post-Graduate Employment focused on employment seeking experience, types of positions held since graduation, professional challenges encountered and problems that might have been better addressed in the curriculum. Background information included residence status, entrance status, undergraduate major, year of graduation, post-graduate education and annual income; these data provided a basis for developing an undergraduate and a post-graduate profile of the respondents.

Implementation Strategies

With some modifications, implementation strategies for this survey followed the procedures outlined in Dillman's (1978) book, Mail and Telephone Surveys. Data collection efforts included a reminder post-card sent one week after the initial mailing and two subsequent follow-up mailings that included the complete survey package. A cover letter from the Dean of the School of Education was sent with each of the complete survey mailings. This letter stressed the significance of the project to the School, the importance of each respondent's contribution, an assurance of confidentiality, an offer of results and a contact for questions. While assuring confidentiality, the surveys included an identification number; this was essential for monitoring returns and provided a potential means of merging the survey data with information from administrative files.

Utilization Strategies

Results from this Alumni Survey were initially presented to the Dean in a comprehensive report of the overall survey results. The contents of the report included an analysis of alumni responses broken down by year of graduation and by academic program. Following the submission of the initial administrative report, results were presented, primarily by means of graphs, to the faculty. This presentation highlighted strengths and areas in need of improvement for the School as a whole with some mention of differences by academic program. Subsequent to the faculty presentation, individual survey reports were prepared for each Program Chairperson. These reports contained the responses of alumni who graduated from the specific

academic program. Program Chairpersons were encouraged to review these data and share them with their faculty in ongoing curricula review and revision.

The various administrative reports previously described focused primarily on graduates' identification of program strengths and areas in need of improvement. Subsequent to producing these reports, further analyses were conducted to examine relationships between graduates' academic major, their evaluation of specific components of the college experience and their overall evaluation of their undergraduate education. The statistical results presented in the following section are based primarily on results from these analyses conducted subsequent to the dissemination of school and department level reports.

Results

Results presented in this section are based on different segments of the total population selected in accordance with the subject of the analysis. The first two analyses - focusing on variations in expectation from college and perceived professional growth through undergraduate education - compare Human Development majors with Teacher Education majors. The remaining analyses, reflecting the primary emphasis in the survey, focus only on Teacher Education majors. These analyses examine the relationship between pre-professional teaching experience and overall evaluation of the undergraduate program; differences in early professional challenges by academic major; recommendations for curricular revision by academic major; and relationships between perceived professional growth and early professional challenges. The analyses examine variation among Early Childhood, Elementary, Secondary and Special Education majors as well as between the most distinctive group, Secondary Education, and all other Teacher Education majors.

Variations in Expectations from College by Academic Major

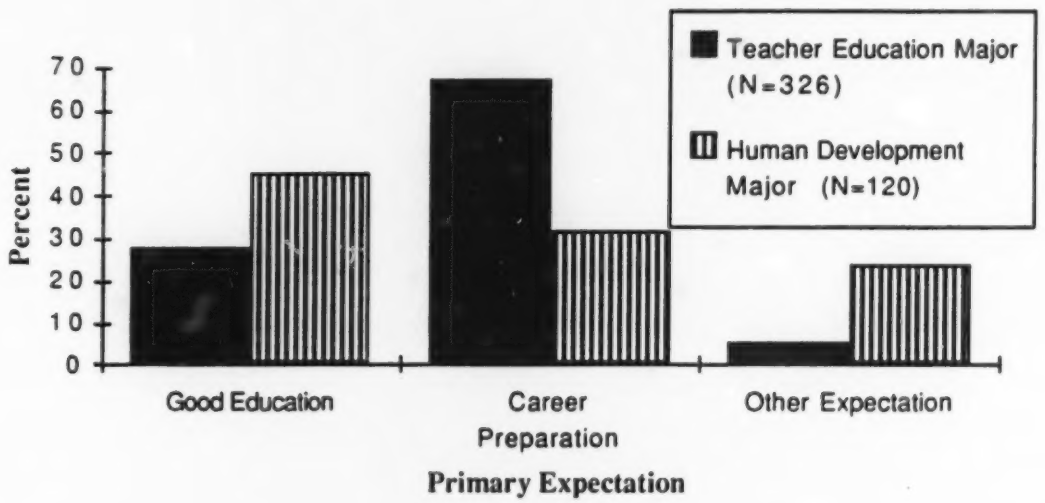
Preliminary analyses, including Chi-square and correlational analyses, were conducted to determine if students in the different teacher education programs - Early Childhood, Elementary, Secondary, and Special Education - differed significantly with respect to primary expectations from their undergraduate education. However, the results revealed no statistically significant

differences among students in the specific teacher education programs. Further Chi-square analysis was then conducted comparing all Teacher Education majors with Human Development majors. Results from this analysis are presented in Figure 1.

Figure 1

Differences in Primary Expectation from Undergraduate Education:

Teacher Education vs. Human Development Majors



Chi-square analysis revealed statistically significant differences in the primary educational expectations of students majoring in Teacher Education and Human Development. As illustrated in Figure 1, the primary expectation of the majority of Teacher Education majors is on their careers. Sixty-seven percent of Teacher Education majors reported Career Preparation as their primary expectation. In comparison, Human Development majors expressed greater variability with respect to their goals. Some 45 percent of Human Development majors cited a Good Education while 31 percent identified Career Preparation as their primary goal.

Results from the comparative analysis of these two majors illustrate the value of this type of data for understanding the expectations and guiding the intellectual development and career planning of students in various academic majors. These results are potentially useful for student

advising and curriculum development. A possible implication is teacher education majors need to be encouraged to value their college education as a unique time to enhance their own intellectual ability and avail themselves of the opportunity to explore the rich resources of knowledge in the various arts, science and humanities disciplines. In contrast, human development majors, who seem initially less concerned about career preparation, might be encouraged to balance their aspirations for intellectual development with early and systematic career planning.

Variations in Perceived Professional Growth by Academic Major

Based on the premise that a college education is intended to enhance many aspects of an individual's life, the alumni survey requested respondents to rate the extent to which their undergraduate education contributed to their professional growth on the following dimensions: Communication Skills, Critical Thinking, Decision Making, Factual Knowledge, Multi-Cultural Awareness, Problem Solving, Self-Understanding and Values Awareness. Comparative analyses were conducted to determine if perceived growth differed significantly between Teacher Education and Human Development majors. Results from these analyses are presented in Table 1.

Table 1

Relationship of Perceived Professional Growth to Academic Major: Teacher Education vs. Human Development Majors

Percent Who Perceived 'Very Much' Growth

Professional Growth Components	Academic Major: Teacher Education (Percent)	Academic Major: Human Development (Percent)	X^2
Values Awareness	33.7	49.5	14.20 ***
Self-Understanding	39.7	57.4	13.02 **
Critical Thinking	35.0	47.8	7.38 *

*p ≤ .05 ** p ≤ .01 *** p ≤ .001

As displayed in Table 1, statistically significant differences were found on three dimensions of perceived professional growth: Critical Thinking, Self-Understanding and Values Awareness. Approximately 50 percent or more of Human Development majors, compared with less than 40 percent of Teacher Education majors perceive that their undergraduate education contributed 'Very Much' to their professional growth on these dimensions.

The substantive issue addressed in this analysis is critical to a comprehensive assessment of the effectiveness of a college education for all students. This study presents a seminal idea that might be refined and expanded in future studies. Given the results obtained in this research and the importance of assessing professional and intellectual growth in general, more work is recommended to establish the theoretical foundation and identify the relevant constructs. Once the theoretical foundation is established, appropriate questions could then be developed and tested empirically to create valid and reliable measurement scales. Design of these measures should reflect the general goals of education, the particular mission of an institution and the specific goals of the academic department.

Evaluation of Pre-Professional Teaching Experience: Quantitative Results

The alumni survey was designed to reflect the importance of field experience in teacher education students' undergraduate education. The survey included several items asking graduates to evaluate the level of challenge and benefit associated with their pre-practicum and full-practicum teaching experiences. Chi-square analyses were conducted examining the relationship between graduates' evaluation of their pre-professional teaching experiences and their overall evaluation of the teacher education program. Results are presented in Table 2.

Table 2

Relationship between Graduates' Satisfaction with Pre-Professional Teaching Experience and their Overall Evaluation of the Teacher Education Program

Pre-Professional Teaching Experience		Evaluative Responses: Very Poorly to Fair	Well	Very Well	Total
Pre-Practicum	**Dissatisfied**	56.3	40.6	3.1	100 % (N=32)
r = .41	**Satisfied**	25.8	45.4	28.8	100 % (N=163)
X^2= 49.79***	**Very Satisfied**	7.1	35.3	57.6	100 % (N=85)
Full-Practicum	**Dissatisfied**	70.0	20.0	10.0	100 % (N=10)
r = .45	**Satisfied**	59.6	36.5	3.9	100 % (N=52)
X^2 = 67.09***	**Very Satisfied**	13.6	43.7	42.7	100 % (N=213)

*** $p \leq .001$

The data presented in Table 2 document the statistically significant relationships between students' pre-professional field experiences and their overall evaluation of their undergraduate education. As indicated by the correlations of .41 for the Pre-Practicum experience and .45 for the Full-Practicum experience, there is a moderately strong tendency for those who are satisfied with their practicum experiences to express a positive evaluation of their undergraduate teacher preparation.

Evaluation of Pre-Professional Teaching Experience: Qualitative Results

Consistent with the quantitative results, qualitative data also give strong voice to the importance of intensive and meaningful practicum experiences as part of the undergraduate program in professional schools such as Education. Alumni comments in this survey emphasize the importance of having extensive, responsible classroom experience with quality supervision during the undergraduate program. As indicated in the following comments, alumni applaud the early classroom experience provided through the Pre-Practicum experience. They also

recommend increased opportunity for student teachers to assume full classroom leadership in their pre-professional teaching experiences.

> The field practicum starting as early as sophomore year was of great assistance to me. This gives students an opportunity to experience many types of education settings and look at different teaching styles.

> I believe pre-practicum student teaching is one of the most beneficial components of teacher preparation. (The university) should be commended for realizing this and beginning student teaching in the sophomore year.

> I am very satisfied with my educational experience . . . The professors and course work were interesting and challenging. One suggestion about the full-practicum ... (is to have) student teachers assume full classroom leadership for one or two weeks at the end of the semester as this gives one a real sense of what teaching is about.

> I feel I would have benefited from more time in a full-practicum situation coupled with methods classroom work . . . My full-practicum was extremely beneficial, but it was over before I felt fully confident to teach independently.

> I recommend that students be given more teaching experience . . . I wish I had <u>two</u> full practicum experiences.

Early Professional Challenges: Work-Related Problems

A primary purpose of this Alumni Survey was to learn more about graduates' early professional experiences; what challenges they encountered; how they dealt with these

challenges; how well they think their undergraduate education prepared them for these challenges; and what changes they would recommend in the undergraduate curriculum to better prepare fu re graduates. In this regard, alumni of the teacher education programs were presented with a list of major work-related problems often mentioned by beginning teachers and were asked to indicate the severity of each problem for them during their first teaching assignment. Table 3 illustrates the extent to which all teacher education majors experienced these problems. As shown, the three top ranking problems were Teaching Students with Different Ability Levels, Maintaining Discipline and Mainstreaming with 40, 37 and 30 percent respectively reporting these as moderate or major problems in their early teaching experience.

Table 3

Rank Order of Major Work-Related Problems in First Teaching Assignment

Percent Reporting 'Moderate' or 'Major' Problems

Problems	Percent	Rank
Teaching Students with Different Ability Levels	40.4	1
Maintaining Discipline	37.5	2
Mainstreaming	29.7	3
Evaluating Students' Performance	28.1	4
Evaluating Own Teaching	28.0	5
Relating to Students' Parents	23.1	6
Motivating Students	20.2	7
Planning Class Instruction	19.2	8
Relating to Administrators	14.2	9
Teaching Students with Different Socioeconomic Backgrounds	13.1	10
Develop Rapport with Students	7.6	11

Note. The percents are based on numbers ranging between 269 and 289.

Differences in Work-Related Problems by Academic Major

Further Chi-square analyses were also conducted to determine if there were significant differences in the problems experienced by graduates of different teacher education programs. Results revealed most notable differences between Secondary Education and other Teacher Education majors.

As shown in Table 4, a significantly higher percent of Secondary Education, compared with other Teacher Education majors, cited Motivating Students, Evaluating their Own Teaching, and Teaching Students with Different Socioeconomic Backgrounds as moderate or major problems in their first teaching assignment. Although the results are not statistically significant, a comparatively higher percent of Secondary Education majors also cited Developing Rapport with Students, Relating to Administrators, Maintaining Discipline and Teaching Students with Different Ability Levels as major or moderate problems. In contrast, a substantially lower percent of Secondary Teachers cited Evaluating Student Performance as a moderate or major problem in their first teaching assignment.

Table 4

Relationship of New Teachers' Work-Related Problems to their Academic Major

Secondary Education vs. Other Teacher Education Majors

Percent Reporting 'Moderate' or 'Major' Problem

	Academic Major		
Problems	**Secondary Education (Percent)**	**Other Teacher Education (Percent)**	X^2
Motivating Students	33.3	19.7	10.51 **
Evaluating Own Teaching	47.4	28.4	8.25 *
Teaching Students with Different Socioeconomic Backgrounds	29.4	11.9	7.83 *

* $p \leq .05$ ** $p \leq .01$

Note. Chi -square is based on the complete distribution of responses.

These results confirm the importance of providing Secondary Education majors with intensive preparation for relating to and managing students. The findings indicate that introducing strategies to motivate students, maintain discipline and develop rapport with students should form the primary core of Secondary Education methods courses.

The inquiry and analysis presented here are potentially relevant to other academic majors, particularly those in professional schools. The topic of early professional challenges or work-related problems is relevant to alumni of most academic programs and institutions. Further, feedback from the alumni regarding the challenges they confront and the adequacy of their preparation should be elicited on a systematic and continuing basis in order to ensure that the education offered is relevant and responsive to the needs of the institution's graduates and of the professions being served by these graduates.

Initially, focus groups might be used with a select number of alumni to identify early career-related problems and professional challenges. A review of the literature, combined with consultation with employers of the alumni and faculty, might expand the initial list. Following this exploratory phase, an instrument might be pilot tested. Factor analysis and reliability analysis might then be employed in analyzing the data to produce valid and reliable measures of early professional problems or challenges.

Relationship of Undergraduate Major to Early Professional Challenges

Following the identification of work-related problems experienced in their early career, alumni were then asked to indicate which problems they think should have been better addressed in their undergraduate program. Graduates as a whole most frequently mentioned Teaching Students of Different Ability Levels, followed by Maintaining Discipline and Relating to Parents. Comparative analysis revealed that graduates from different teacher education majors varied to some extent in the ranking of these problems. Special Education majors were quite different from the group as a whole; they most frequently mentioned Relating to Parents, followed by Teaching Students of Different Ability Levels and Relating to Administrators as problems in need of greater attention in the curriculum. Secondary Education majors most

frequently cited Maintaining Discipline followed by Teaching Students of Different Ability Levels and Motivating Students. The type of information illustrated with these data is potentially very helpful to chairpersons, program coordinators and faculty committees in identifying the areas that need to be strengthened in the total curriculum and in individual programs.

Relationship of Perceived Professional Growth to Problems in Early Teaching

Statistical analyses were conducted to test the hypothesis that perceived professional growth during undergraduate education would correlate negatively with the extent to which graduates experienced certain problems in their early professional careers. Preliminary analyses were based on individual items and focused on the three problems most frequently cited as moderate or major problems by the graduates - Teaching Students with Different Ability Levels, Maintaining Discipline and Mainstreaming. Perceived professional growth included the following dimensions: Communication Skills, Critical Thinking, Decision Making, Factual Knowledge, Multi-Cultural Awareness, Problem Solving, Self-Understanding and Values Awareness.

Statistically significant correlation coefficients were found between six of the eight perceived professional growth components and two of the top ranking problems: Teaching Students of Different Ability Levels and Mainstreaming. The coefficients ranged between -.12 and -.25 and were significant at the .01 probability level. Also, perceived growth in Problem Solving related significantly, at the .01 probability level, to each of the top three problems: Teaching Students with Different Ability Levels (-.25), Mainstreaming (-.22), and Maintaining Discipline (-.14). As indicated by the negative sign, the more a graduate perceived growth on these dimensions, the less likely he or she would have difficulty with these issues. Although the magnitude of the relationships found was relatively weak, this preliminary analysis was based only on single items.

Further analysis involved an effort to form more reliable measures with the existing data. The following scales were created: Pre-Professional Teaching Experience, Perceived Professional Growth, Course Satisfaction, and Teacher-Student Relationship Problems. The

development of the scales involved conducting factor analyses to simplify the data, reveal the underlying constructs and identify correlated items that might be combined to form these scales. The items and response options for each of the scales are summarized in the following outline.

Pre - Professional Teaching Experience How challenging were your Pre-Practicum Field experiences and your Full-Practicum Field experiences? (5-point scale-'Not at All' to 'Extremely') How satisfied were you with the following as opportunities to relate theory to practice: your Pre-Practicum, your Full-Practicum, and your Student Teaching? (4-point scale -'Very Dissatisfied' to 'Very Satisfied')	**Perceived Professional Growth** To what extent do you feel that your undergraduate program of studies and related experiences contributed to your professional growth and development in each of the following areas: Communication Skills, Critical Thinking, Decision Making, Problem Solving, Self-Understanding, and Values Awareness ? (5-point scale -'Not at All' to 'Very Much')
Course Satisfaction How satisfied are you with your Overall School of Education Courses and Methods Courses? (4-point scale -'Very Dissatisfied' to 'Very Satisfied')	**Teacher-Student Relationship Problems** Please indicate the severity of the following problems for you during your first teaching assignment: Developing a Rapport with Students, Maintaining Discipline, and Motivating Students. (5-point scale-'Not at All' to 'Major')

Table 5 presents the components and reliability levels for each of the scales used in further analyses.

Table 5

Teacher Education and Experience Scales

Scale Name	No. of Items	Mean	Standard Deviation	Reliability Coefficient
Pre-Professional Teaching Experience	5	3.52	.368	.76
Perceived Professional Growth	6	4.00	.117	.86
Course Satisfaction	2	3.24	.050	.75
Teacher-Student Relationship Problems	3	2.05	.564	.70

Relationship between Perceived Professional Growth, Pre-Professional Teaching Experience and Overall Evaluation of Undergraduate Education

Correlational analyses revealed statistically significant positive relationships between Perceived Professional Growth through undergraduate education, an evaluation of Pre-Professional Teaching Experience and the overall Evaluation of Undergraduate Education. The correlation coefficients, significant at the .01 probability level, are .37 for Perceived Professional Growth and .44 for Pre-Professional Teaching Experience. Regression analyses were then conducted to identify which variables best predicted students' overall evaluation of their undergraduate program. The population for the regression was limited to graduates of teacher education programs who had complete data for the independent variables and who responded to the question which served as the dependent variable, "In your opinion, how well did your teacher preparation program prepare you for your present employment?" Regression results are presented in Table 6.

Table 6

Stepwise Regression Results Predicting Overall Evaluation of the Teacher Preparation Program from Course Satisfaction, Pre-Professional Teaching Experience and Perceived Professional Growth

Independent Variables	Bivariate r	Multiple r	R^2	R^2 Change	Beta	F ratio
Course Satisfaction	.55	.55	.30	.30	.55	120.08***
Pre-Professional Teaching Experience	.44	.61	.38	.08	.29	83.27 ***
Perceived Professional Growth	.37	.63	.40	.02	.15	59.91***

*** p≤.001

As shown in Table 6, three variables contributed significantly to predicting students' overall evaluation of their teacher preparation program: Course Satisfaction, Pre-Professional Teaching Experience, and Perceived Professional Growth through undergraduate education. Among these three variables, Course Satisfaction is the strongest predictor explaining 30 percent of the variance in overall satisfaction. With this variable in the equation, Pre-Professional Teaching Experience explains an additional 8 percent and Perceived Professional Growth another 2 percent. The relative influence of each of the independent variables is also reflected in the Beta coefficients which are .55, .29 and .15 respectively for Course Satisfaction, Pre-Professional Teaching Experience, and Perceived Professional Growth. Each Beta coefficient indicates the amount of change in the dependent variable for every unit change in the independent variable.

Summary

This paper illustrates how both the researcher and the administrator have critical roles with respect to ensuring the utilization of institutional research studies in general and alumni research in particular. The paper presents design principles, analytical techniques, implementation procedures and utilization strategies intended to enhance the contribution of alumni research to curriculum review and planning, administrative decision making, outcomes assessment and accreditation. Alumni studies enable institutions to meet typical accreditation standards requiring follow-up studies of graduates.

Some of the critical design issues addressed in the discussion include: the importance of identifying the appropriate population for the survey; identifying subpopulations for future analyses; planning to ensure an adequate respondent group for analysis; involving the intended audiences of the research in the design phase; designing the survey instrument to obtain the content and level of evaluative feedback of interest to intended audiences; and designing questions and scales that will serve as reliable measures of the constructs addressed in the research.

Three critical principles are identified to guide the implementation of the research. The research should be conducted in accordance with the highest professional standards. Communication with the respondents should be professional, personal and genuinely appreciative of their contribution. Well planned and systematic follow up procedures should be implemented to ensure a high response rate.

The analyses of alumni research data should be planned during the design phase so that the questions will be designed and the data obtained at the appropriate level for the analysis. Some general guidelines in this area include: preparing customized reports for audiences at different levels - deans, chairpersons, program coordinators and faculty; including both quantitative and qualitative data in the survey; and ensuring the quantitative data will be at the appropriate level for analysis. Methods of analysis will have a direct impact on utilization of the results.

How the results are presented also affects utilization. With the alumni study reported in this paper, the researcher chose to emphasize the positive findings with a deliberate focus on program strengths. Areas in need of improvement were presented as constructive possibilities for program enhancements. This positive approach, which showed a sensitivity to the faculty whose work was being evaluated in this survey, contributed to a positive reception of the findings. In addition, the use of graphs also enhanced the accessibility of the findings.

One of the most important aspects of the substantive findings in this research is the valuable feedback graduates provided with respect to challenges they encountered early in their professional careers and, more importantly, what recommendations they offered to better prepare future graduates to meet these challenges. This research demonstrates that the perspective gained through experience is indeed one of the unique values of alumni research (Williford and Moden, 1989).

The focus on early professional challenges and the relationship to previous education are potentially relevant to other academic majors, particularly those in professional schools. As noted previously, feedback from the alumni regarding the challenges they confront and the adequacy of their preparation should be elicited on a systematic and continuing basis in order to ensure that the education offered is relevant and responsive to the needs of the institution's graduates and of the professions being served by these graduates.

Finally, the high level of administrative support provided the essential context for the successful utilization of this alumni research study. Administrative vision and leadership, combined with a strong commitment to planning based on research, are essential determinants of utilization of program research. The alumni survey discussed in this paper benefited from the presence of this spirit and commitment with the support of the Dean of the School of Education and, with her leadership, the support of the Chairpersons and Faculty.

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